

## California Electric and Magnetic Fields Program

# NEWSLETTER

PROGRAM ACTIVITIES UPDATE

December 1999

### New British Studies on EMF

Three articles on EMF studies from Great Britain were published in early December and have attracted some attention on the part of the British media. Two articles from the research team headed by Professor Denis Henshaw<sup>1,2</sup> report measurements of ionized particles and pollutant aerosols near overhead transmission lines. The third article describes the findings of the EMF component of a very large epidemiological study on childhood leukemia headed by Sir Richard Doll<sup>3</sup>.

The Henshaw papers, through both theoretical arguments and measurements, appear to confirm the hypothesis advanced years ago by the same author<sup>4</sup> that electric fields near transmission lines increase the concentration of airborne pollutants that could be both inhaled and deposited on the skin of subjects nearby. Some of these pollutants, the authors argue, could be responsible for the observed associations between residence near power lines and adverse health effects. It needs to be stressed that the risk is not incurred *inside the homes* near power lines but in outdoor areas. While we do not wish to prejudge the impact of these papers on our final Risk Evaluation, we note that this theory does not explain the association observed in the U.S. epidemiological studies in which exposure is mostly due to low voltage distribution lines.

The Doll study reports no association between measured residential fields and any childhood cancer. The only risk estimates that are barely suggestive of an association are for magnetic field exposures above 4 milliGauss (mG). For this exposure category, the study reports elevated, but not statistically significant, odds ratios. The obvious weakness of this study is the small number of subjects exposed to more than 2 mG. However, the study offers significant information on the association (or rather, the lack of an association) for exposure levels between 0 and 2 mG, since the number of subjects in this range is very large. The study appears to lend weight to the pooled analysis by Greenland et al., which indicates that if a risk exists, it is confined to relatively high time-weighted average exposures. These are experienced by only a few percent of the population. The effect of the Doll study on the meta-analysis of childhood leukemia studies being prepared by Daniel Wartenberg is less clear. We have sent a copy of the paper to Dr. Wartenberg and asked him to include its findings and those of the two recent Canadian studies in the revised manuscript of his presentation at last January's Epidemiology Workshop.

These articles will be included in the Program's risk evaluation. Copies of the papers will be distributed in the next program mailing.

1. Fews et al. "Increased exposure to pollutant aerosols under high voltage power lines", Int J Radiat Biol, 1999, vol. 75, pp. 1505-1521.
2. Fews et al. "Corona ions from power lines and increased exposure to pollutant aerosols", Int J Radiat Biol, 1999, vol. 75, pp.1523-1531.
3. UK Childhood Cancer Study Investigators, "Exposure to power-frequency magnetic fields and the risk of childhood cancer", 1999, the Lancet, vol. 354, pp. 1925-1931.
4. Henshaw et al. "Enhanced deposition of radon daughter nuclei in the vicinity of power frequency electromagnetic fields", Int J Radiat Biol, 1996, vol. 69, pp. 25-38.

## Upcoming Meetings and Workshops

In the first quarter of next year, the California EMF Program expects to hold several meetings and workshops related to our research projects. These events are:

- a telephone conference to discuss Professor Detlof von Winterfeldt's response to the comments received on the Power Grid Policy Project draft
- a Scientific Advisory Panel meeting to allow SAP members to discuss and vote on the final version of the program's Risk Evaluation Guidelines
- a workshop to answer questions about the School Policy Analysis Project software model and draft report

The exact dates of these meetings will depend on the progress of each project. We will announce the details of each event as more information becomes available.

## Letter to the California Public Utilities Commission

In October, the California Public Utilities Commission requested that the California EMF Program provide them with the time schedules and procedures for completing the major research projects, descriptions of these projects and their final products, and a monthly progress report (the program newsletter) to help them remain informed about our progress. At the end of November, 1999, the California EMF Program sent these items to the CPUC. A copy of this letter and its attachments is included in the regular program mailing dated December 9, 1999.

## California Report to the CPUC

Program staff finished revising the draft report to the CPUC based on the comments we received from our stakeholders last summer. The report was also updated to include information about the Program's progress through the end of October. California Department of Health Services officials are now reviewing this final document, and the report will be distributed to the CPUC and our stakeholders once this review is complete. We hope to mail it out early next year, as long as there are no unforeseen delays.

## Change in Public Utilities Commission Membership

Joel Hyatt has resigned from the California Public Utilities Commission (CPUC) after five months as a commissioner. Governor Gray Davis appointed Loretta Lynch to fill the vacancy on the five-member commission. Earlier

this year, Loretta Lynch briefly served as a temporary CPUC commissioner until the appointment of Hyatt and current commissioner Carl Wood in June. Lynch will leave her present job as director of the state Office of Planning and Research to join the CPUC early next year.

## Financial Updates to SAC Core

The next quarterly budget and timeline update will be sent to Core SAC members in January 2000.

## Farewell to Cherry Elliott

Cherry Elliott, part-time secretary to the California EMF Program for more than two years, has left the program to begin a full-time job closer to her home in San Francisco. In addition to her regular secretarial duties Cherry worked extensively on the program's Web site, and her desktop publishing skills greatly improved the appearance of many program products. We will miss her many contributions to the program, and we wish her well in her future endeavors. Her last day with us was December 7, 1999, and we hope to be able to hire a new secretary early next year.

## Research Unit Progress

**Risk Evaluation Guidelines:** The revised risk evaluation guidelines, together with the list of comments and the staff's reply to them, have been reviewed by DHS Deputy Director James Stratton and submitted to the Director of the Department of Health Services for approval.

**School Policy Analysis:** Work on the model has been completed. Keith Florig has drafted the software's documentation and is working on the narrative discussion of the analysis.

**Power Grid/Land Use Policy Analysis:** Detlof von Winterfeldt, in consultation with the EMF staff, is drafting a plan to review the report in light of the stakeholders' comments. The staff has revised the budget to free some additional funds for the work that incorporating this plan into the draft will require.

**Epidemiology Workshop:** Staff are continuing to edit the discussions from January's workshop. Two more papers have been submitted to the journal *Bioelectromagnetics*. The workshop proceedings will be

A project of the Public Health Institute

published in this journal as soon as all related materials are completed.

**Prospective Miscarriage Study:** EMF Staff and the Kaiser team have developed a detailed analysis plan for the interim project report expected by the end of January. This will only address the specific hypothesis generated by the pilot DHS prospective study (presented as a poster at the 1998 meeting of the Bioelectromagnetics Society) that motivated the Kaiser study.

The full analysis of the data for the final report, expected by November 2000, will be the exclusive responsibility of the Principal Investigator, De-Kun Li, and the Kaiser team.

**School Exposure Assessment Survey:** In cooperation with the engineering consultants, we have developed a common scope of work, timeline, and budget for benchmarking the power line mitigation costs used in this project against the costs the consultants would ask to do similar work.

**Occupational Exposure Study:** Work on the data analysis continues. A draft final report is expected by the end of January 2000.

**Policy Integration:** An outline of this project, which will be a portion of the final report of the whole EMF Program, has been discussed with the CPUC and the SAC and revised based on their comments.

**Risk Evaluation:** Walter Rogers has submitted a preliminary draft of his review of EMF animal studies. The other contractors continue to work on their literature reviews.

**EMF Program Library:** Work to include current relevant publications in the program's library continues.

## Education and Technical Assistance Unit Updates

**CPUC Report Coordination:** Education Unit staff coordinated the updates and revisions to the California EMF Program report to the CPUC. In the last month, this unit coordinated the last changes to the revised draft, checked the draft for consistency, and assembled the supporting and the California Department of Health Services

materials and appendices. Staff also helped develop the materials sent to the CPUC in response to their October 15<sup>th</sup> request for detailed information on the California EMF Program.

**Web Site:** The Education Unit completed the restructuring of the Web site and oversaw its posting on the Internet. The updated and restructured site is now on line. Over the next several weeks staff will monitor the new site to ensure that it is working properly, and will update and correct information on the site that may have changed recently. Eventually, staff hope to make more program products accessible on this site. Program staff continue to track the use of the site, which gets hundreds of visits each month from people all over the world.

**Response to Public Questions:** The Education Unit continues to receive several dozen questions each month from members of the public who want information about the possible health effects of electric and magnetic fields. Over the last month staff have had questions from a wide variety of people, including students wanting information for school projects, and people with concerns about fields from power lines, appliances, and other electrical equipment near their homes and offices.

**Other Recent Activities:** Staff are continuing work on new fact sheets and educational materials, and are also involved in meeting planning and the coordination of regular and special program mailings. In addition, Education Unit staff devote a great deal of time to supporting the research program and helping prepare draft and final research products for distribution to stakeholders and the public.

### Milestones Met 11/16-12/15

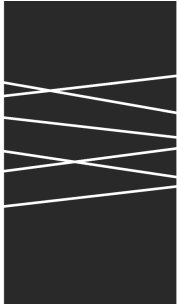
- Risk Evaluation Guidelines final draft sent to DHS officials for review and approval to release
- Program report to the California Public Utilities Commission final draft sent to DHS officials for review and approval to release
- Response to PUC letter dated October 15, 1999, sent before November 30, 1999, due date

## EMF PROGRAM STAFF CONTACT INFORMATION

	(510)			(510)	
Raymond Neutra	622-4905	rneutra@dhs.ca.gov	Jessica Hecht	622-4430	jhecht@dhs.ca.gov
Alvin Leonard	622-4432	alvinleonard@yahoo.com	Jack Collins	622-4431	emfadmin@dnai.com
Vincent Del Pizzo	622-4418	delpizzo@yahoo.com	Maria Giron	622-4433	mlgiron@netscape.net
Geraldine Lee	622-5091	gerrilee17@yahoo.com	Webb Sprague	622-4500	emf@dnai.com

main phone (510) 622-4500, fax (510) 622-4505

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### California Electric and Magnetic Fields Program

A project of the California Department of Health Services and the Public Health Institute  
Elihu Harris State Office Building  
1515 Clay St., 17<sup>th</sup> Floor  
Oakland, CA 94612